

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
NORFOLK DIVISION**

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| CENTRIPETAL NETWORKS, INC., | § | |
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| Plaintiff, | § | |
| | § | |
| v. | § | |
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| PALO ALTO NETWORKS, INC., | § | Civil Action No. 2:21-CV-00137 - |
| | § | AWA-RJK |
| Defendant. | § | |
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MEMORANDUM IN SUPPORT OF DEFENDANT'S MOTION TO DISMISS

Pursuant to Fed. R. Civ. P. 12(b)(6), Defendant Palo Alto Networks, Inc. (“PAN”) submits this Memorandum of Law in support of its Motion to Dismiss for Failure to State a Claim on the basis that (1) Centripetal fails to plausibly state a claim of direct, indirect, or willful infringement, and (2) three of the Asserted Patents claim patent-ineligible subject matter under 35 U.S.C. § 101.

Centripetal’s infringement claims suffer from a number of fatal defects. First, its claims for induced, contributory, and willful infringement fail because Centripetal has not plead any facts from which one could reasonably infer that PAN had pre-suit knowledge of any of the Asserted Patents or specifically intended its customers to infringe any of the Asserted Patents. Second, Centripetal’s claims for contributory infringement fail because Centripetal has failed to allege facts to support a plausible inference that the accused products have no substantial non-infringing uses—an essential element to a claim for contributory infringement. Third, Centripetal’s willfulness claims fail because its allegations regarding PAN’s egregious behavior are nothing more than threadbare recitals of such behavior and conclusory statements.

Finally, Centripetal’s direct and indirect infringement claims fail because, despite its lengthy complaint, Centripetal makes no genuine attempt to tie a complete asserted claim to any particular accused product (or combination thereof). Rather, Centripetal’s claims for direct infringement are nothing more than disorganized assertions interspersed with claim language that provide no indication of how the features of the accused products allegedly satisfy the elements of the asserted claims. Because liability for indirect infringement (both inducement and contributory infringement) arises only if there is direct infringement, this failing is fatal to both Centripetal’s direct and indirect infringement claims.

As to patent-ineligibility, the claims of U.S. Patent Nos. 10,542,028, 10,757,126, and 10,091,246 (the “Ineligible Patents”) fail both steps of the patentability test articulated in *Alice Corp. Pty. Ltd. v. CLS Bank Int’l.*, 573 U.S. 208, 217-19 (2014). At *Alice* step one, the claims of the Ineligible Patents (the “Ineligible Claims”) are directed to filtering and sorting data (here, computer network packets) based on rules—an age-old idea that the Federal Circuit has repeatedly held to be impermissibly abstract and patent-ineligible. *Intell. Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1313-14 (Fed. Cir. 2016) (“*IVP*”) (filtering emails based on rules is impermissibly abstract); *Glasswall Solutions, Ltd. v. Clearswift Ltd.*, 754 F. App’x 996, 997-98 (Fed. Cir. 2018) (“filtering electronic files and data” is impermissibly abstract); *see also Limelight Networks, Inc. v. XO Commc’ns, LLC*, 241 F. Supp. 3d 599, 607 (E.D. Va. 2017) (“A patent cannot claim to invent a method directed to a mental process that the human mind could carry out, such as sorting according to a set of rules.”) (citation omitted). Enhancing security using rule-based filtering is a longstanding practice that is not unique to computer networks—and has long occurred at the boundaries of protected areas. Far from being “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks,” *DDR Holdings*,

LLC v. Hotels.com, L.P., 773 F.3d 1245, 1257 (Fed. Cir. 2014), here the Ineligible Claims are directed to problems that have long existed outside the realm of computer networks. Further, the Ineligible Claims are written in functional terms, describing a desired result instead of a particular solution for achieving that result—a hallmark of patent-ineligibility. *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016) (“[T]he essentially result-focused, functional character of claim language has been a frequent feature of claims held ineligible under § 101.”).

At *Alice* step two, once the abstract idea is removed from the Ineligible Claims, none of what remains recites anything inventive—such as new components, or a technological improvement to the functioning of the recited conventional components—that might transform the claims into patent-eligible subject matter. To the extent the Ineligible Claims recite components at all, those components—such as processors and memory—are conventional, and the claims recite them to perform only their conventional functions (e.g., a processor processing, and a memory storing instructions). Critically, none of the Ineligible Claims “overrides” the routine and conventional use of the claimed components. *Cf. DDR*, 773 F.3d at 1258 (finding claims to be patent-eligible where there was such “override”).

Accordingly, the Ineligible Claims are patent-ineligible and Centripetal’s corresponding causes of action, *i.e.*, its First through Fourth, Twenty-First, and Twenty-Second causes of action, should be dismissed with prejudice.

I. FACTUAL AND PROCEDURAL BACKGROUND

Centripetal alleges that PAN infringes twelve patents from six different families by making/using/selling one or more of seven different products: Next Generation Firewall (“NGFW”), Panorama, Cortex, AutoFocus, MineMeld, DNS Security Service, and Enterprise DLP Service (collectively the “Accused Products”). *See* Dkt. 1 (Centripetal’s Complaint) (hereinafter “Compl.”). For each Asserted Patent, Centripetal alleges PAN directly and indirectly infringes,

literally and/or under the doctrine of equivalents. *See id.* at ¶¶ 48-49. With respect to indirect infringement, Centripetal alleges PAN both induces and contributes to infringement. *Id.* Centripetal further contends that PAN’s alleged infringement was willful. *Id.* at ¶ 50.

II. ARGUMENT

A. Applicable Legal Standards.

To survive dismissal under Rule 12(b)(6), “a complaint must contain sufficient factual matter, accepted as true, to ‘state a claim to relief that is plausible on its face.’” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007)). “Threadbare recitals of the elements of a cause of action, supported by mere conclusory statements, do not suffice.” *Iqbal*, 556 U.S. at 678; *see also Twombly*, 550 U.S. at 557. Accordingly, the plaintiff must “do more than simply allege that he or she is entitled to relief;” instead, “the complaint must ‘show’ that the plaintiff is entitled to relief” through well-pled facts. *Macronix Int’l Co. v. Spansion Inc.*, 4 F. Supp. 3d 797, 801 (E.D. Va. 2014) (referencing Fed. R. Civ. P. 8).¹ A plaintiff cannot satisfy this burden through “unwarranted inferences, unreasonable conclusions, or arguments” masquerading as factual allegations. *Nemet Chevrolet, Ltd. v. Consumeraffairs.com, Inc.*, 591 F.3d 250, 255 (4th Cir. 2009). Similarly, “legal conclusions, elements of a cause of action, and bare assertions devoid of further factual enhancement fail to constitute well-pled facts for Rule 12(b)(6) purposes.” *Id.*

1. *Direct Infringement.*

Direct infringement claims are subject to the pleading standards established in *Iqbal* and *Twombly*, which require more than “vague generalities” and “conclusory formulaic recitations” of

¹ *See also Jenkins v. LogicMark, LLC*, No. 3:16-CV-751-HEH, 2017 WL 376154, at *3 (E.D. Va. Jan. 25, 2017) (“Factual allegations must be enough to raise a right to relief above the speculative level’ to one that is ‘plausible on its face,’ rather than merely ‘conceivable.’”) (quoting *Twombly*, 550 U.S. at 555, 570).

infringement. *Golden v. Apple Inc.*, 819 F. App'x 930, 931 (Fed. Cir. 2020), cert. denied, 141 S. Ct. 1067, 208 L. Ed. 2d 530 (2021) (citing *Twombly*, 550 U.S. at 570; *Iqbal*, 556 U.S. at 678). To adequately plead direct infringement, “a plaintiff must first identify which patent claims the defendant infringed … [and] must also specify which features of an accused product correspond to the limitations in the allegedly infringed patent.” *Chan Soo Kim v. Green Tea Ideas, Inc.*, No. 3:17-cv-449-JAG, 2018 WL 1172998, at *2 (E.D. Va. Mar. 6, 2018). “Moreover, the plaintiff must identify with particularity **how** each allegedly infringing feature of the accused product infringes the patent, literally or under the doctrine of equivalents.” *Id.* (emphasis in original); *see also Asghari Kamrani v. U.S.A.A.*, No. 2:15-cv-478, 2016 WL 1253533, at *4 (E.D. Va. Mar. 22, 2016) (“Plaintiffs must detail how **each** [asserted] claim is infringed.”) (emphasis added).

2. *Induced Infringement.*

To adequately plead induced infringement, a plaintiff's complaint must contain facts “plausibly showing” **both** (1) “that the defendant specifically intended its customers to infringe the patents-in-suit,” and (2) that the defendant “knew that the customer's acts constituted infringement.” *CarFax, Inc. v. Red Mountain Techs., Inc.*, 119 F. Supp. 3d 404, 415 (E.D. Va. 2015) (citing *In re Bill of Lading Transmission & Processing Sys. Patent Litig.*, 681 F.3d 1323, 1339 (Fed. Cir. 2012)). With respect to the second element, it is not enough to simply allege that a defendant knew of the allegedly infringing act; the plaintiff must allege facts that plausibly support the conclusion that the defendant both (a) knew of the patent, and (b) knew that the induced acts constitute infringement. *Commil USA, LLC v. Cisco Sys., Inc.*, 575 U.S. 632, 639 (2015).

3. *Contributory Infringement.*

With respect to contributory infringement, a plaintiff must plead facts plausibly showing that (1) the defendant knew of the asserted patents and that its products were “especially made” for use in an infringement of such patents, and (2) the accused products have “no substantial non-

infringing use.” *Jenkins v. v. LogicMark, LLC*, No. 3:16-CV-751-HEH, 2017 WL 376154, at *4 (E.D. Va. Jan. 25, 2017); *see Bill of Lading*, 681 F.3d at 1337 (to survive a motion to dismiss, a plaintiff must plead, *inter alia*, “facts that allow an inference that the components sold or offered for sale have no substantial non-infringing uses.”).

4. *Willfulness.*

A plaintiff alleging willful infringement must, “plead facts sufficient to support an inference ‘plausible on its face’ that the alleged conduct is of the egregious nature described in [*Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1935 (2016)].” *Jenkins*, 2017 WL 376154, at *5. Whether the alleged infringement is egregious enough to justify enhanced damages turns on an assessment of the accused infringer’s state of mind. *See Halo*, 136 S. Ct. at 1933 (“culpability … is generally measured against the actor’s knowledge at the time of the challenged conduct.”). Thus, to survive a motion to dismiss, a plaintiff must establish that the defendant had pre-suit knowledge of the asserted patent(s). *See Bushnell Hawthorne, LLC v. Cisco Sys.*, No. 1:18-CV-760, 2019 WL 8107921, at *2 (E.D. Va. Feb. 26, 2019) (dismissing willfulness allegations because “[c]omplaint alleges no facts making it plausible, as opposed to merely possible, that defendant had pre-lawsuit knowledge of the patent—a ‘prerequisite’ for a willfulness claim”); *see also Jenkins*, 2017 WL 376154 at * 5 (dismissing willfulness allegations because, plaintiff failed to “allege facts from which the Court could infer that [defendant] had actual notice of the patents-in-suit” or that Defendant’s actions were “willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant, or—indeed—characteristic of a pirate”).

5. *Patent Ineligible Subject Matter.*

Patent eligibility under § 101 is a question of law, which courts may resolve on a motion to dismiss. *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362 (Fed. Cir. 2015); *Consumer 2.0, Inc., v. Tenant Turner, Inc.*, 343 F. Supp. 3d 581, 583 (E.D. Va. 2018), *aff’d*, 796 F. App’x

752 (Fed. Cir. 2020) (granting motion to dismiss as patent-ineligible claims that “use generic computing devices and techniques to provide automated entry to a property”). Claims directed to abstract ideas are not patentable. *Alice*, 573 U.S. at 216-17. Courts apply a two-step framework “for distinguishing patents that claim … abstract ideas from those that claim patent-eligible application of those concepts.” *Id.* at 217. In applying this framework, courts may analyze § 101 issues based on “representative claims” where, as here, the challenged claims are “substantially similar and linked to the same abstract idea.” *Content Extraction*, 776 F.3d at 1348; *CalAmp Wireless Networks Corp. v. ORBCOMM, Inc.*, 233 F. Supp. 3d 509, 512 n.1 (E.D. Va. 2017).

At *Alice* step one, courts “must first determine whether the claims at issue are directed to a patent-ineligible concept.” *Id.* at 218. This requires “looking at the ‘focus’ of the claims, their ‘character as a whole,’” to determine if they are directed to excluded subject matter. *Elec. Power*, 830 F.3d at 1353. “The inquiry often is whether the claims are directed to ‘a specific means or method’ for improving technology or whether they are simply directed to an abstract end-result.” *RecogniCorp, LLC v. Nintendo Co., Ltd.*, 855 F.3d 1322, 1326 (Fed. Cir. 2017) (citation omitted). A claim that can be performed mentally or analogized to brick-and-mortar concepts likely is directed to an abstract idea. *See, e.g., CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1371 (Fed. Cir. 2011) (“[M]ethods which can be performed mentally, or which are equivalent of human mental work, are unpatentable abstract ideas”); *IV I*, 838 F.3d at 1314 (analogizing abstract claim to brick-and-mortar post office).

At *Alice* step two, after removing the abstract idea from the claims, courts search for a remaining “‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (citation omitted). There is nothing inventive about implementing an abstract idea using “‘well-understood, routine, conventional activit[ies]’

previously known to the industry.” *Id.* at 225 (citation omitted). Likewise, limiting a claim to a particular technological environment does not supply an inventive concept to an otherwise abstract claim. *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343, 1348-49 (Fed. Cir. 2014).

B. Centripetal Has Not Plausibly Alleged Indirect Infringement (Induced or Contributory) or Willful Infringement.

1. *Centripetal's Failure to Plausibly Allege Knowledge of the Patents is Fatal to Each of Centripetal's Induced, Contributory, and Willful Infringement Claims.*

To adequately plead each of induced, contributory, and willful infringement, Centripetal must plead facts sufficient to plausibly demonstrate PAN had knowledge of the Asserted Patents. *DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1304 (Fed. Cir. 2006) (“The requirement that the alleged infringer knew or should have known his actions would induce actual infringement necessarily includes the requirement that he or she knew of the patent.”); *Fujitsu Ltd. v. Netgear Inc.*, 620 F.3d 1321, 1326 (Fed. Cir. 2010) (“To establish contributory infringement, the patent owner must show … that the accused infringer had knowledge of the patent....”); *Bushnell*, 2019 WL 8107921 at *2 (“[P]re-lawsuit knowledge of the patent” is “a prerequisite for a willfulness claim”). Centripetal does not plead that it provided pre-suit notice of any Asserted Patent to PAN. Rather, Centripetal recites a series of tangential allegations, none of which, alone or in combination, plausibly demonstrates that PAN had pre-suit knowledge of the Asserted Patents.

First, Centripetal alleges that “PAN had knowledge of the Asserted Patents based on PAN’s interactions with Centripetal through various channels.” Compl. at ¶ 50. These purported interactions consist of: (1) alleged visits to portions of “Centripetal’s website regarding business, products, patents, and press releases discussing Centripetal’s patent litigations,” and (2) receipt of “datasheets and white papers regarding Centripetal’s products” either by downloading them from

Centripetal’s website or through correspondence with Centripetal personnel. *Id.* at ¶ 51. As to the datasheets, Centripetal asserts that the documents “indicate Centripetal’s products are subject to one or more U.S. patents.” *Id.* But even if true, none of those allegations plausibly demonstrates that PAN had knowledge of the *Asserted* Patents.

Centripetal does not allege that any of the material purportedly accessed or received by PAN identified any of the Asserted Patents. At most, Centripetal’s allegations demonstrate merely that it is conceivable, but not plausible, that PAN knew about the Asserted Patents. Without more, however, such allegations are “not sufficient for pleading knowledge under *Iqbal/Twombly*.” *See Rembrandt Soc. Media, LP v. Facebook, Inc.*, 950 F. Supp. 2d 876, 883 (E.D. Va. 2013) (finding that sharing the same law firm, purchasing a patent that cited an asserted patent, and being served with a lawsuit over a patent that cited the asserted patent were insufficient because they demonstrated nothing “more than a conceivable possibility of knowledge of the [asserted patent], rather than a plausible inference that [defendant] possessed such knowledge”).

Second, Centripetal alleges that in mid-2016 an investment bank introduced Centripetal to PAN and, as a result, Centripetal and PAN had telephone conversations and exchanged emails “to explore the possibility” of doing business together. Compl. at ¶ 52. Centripetal alleges that, “in e-mail correspondence with PAN in June 2016, Centripetal provided an overview of its . . . patented technology,” and, following execution of an NDA by PAN on June 21, 2016, Centripetal disclosed additional “details about its proprietary and patented technology.” *Id.* at ¶¶ 52-54. Even if true, those communications took place ***more than two years before*** any of the Asserted Patents issued,² and thus could not possibly show that PAN had knowledge of patents that did not yet exist.

Third, Centripetal alleges that “[s]ince 2016, Centripetal has met with PAN employees at

² The ’906 Patent, issued on October 2, 2018, was the first of the Asserted Patents to issue.

several industry conferences” and “provided demonstrations of its products at these industry conferences.” *Id.* at ¶ 54. This allegation is similarly insufficient to support a plausible inference that PAN had knowledge of the Asserted Patents. As an initial matter, Centripetal does not allege that any of these conferences took place after the Asserted Patents issued—one of which issued as recently as August 25, 2020.³ Discussions occurring before the Asserted Patents came into existence could not possibly provide knowledge of those patents. Further, Centripetal does not allege that *any* patents—much less the Asserted Patents—were discussed at the conferences; instead, Centripetal alleges merely that it “provided demonstrations of its *products*.” *Id.* at ¶ 54 (emphasis added). At best, these allegations suggest it is conceivable PAN knew about the Asserted Patents, but they are insufficient to show PAN’s knowledge is plausible and thus are “not sufficient for pleading knowledge under *Iqbal/Twombly*.” *See Rembrandt*, 950 F. Supp. 2d at 883.

Fourth, Centripetal alleges that, in July 2017, an investment banker “reached out to PAN to introduce Centripetal as an investment opportunity,” and thereafter PAN and Centripetal discussed “Centripetal’s technology.” Compl. at ¶ 55. Centripetal further alleges that, during those discussions, PAN “requested access to technical documentation regarding Centripetal’s products.” *Id.* But Centripetal does not allege that the Asserted Patents, nor any other patents, were discussed—it alleges only that the discussions related to “Centripetal’s technology.” *Id.* Regardless, the discussions took place *more than one year* before any of the Asserted Patents issued, and thus could not have possibly provided PAN knowledge of them.

Fifth, Centripetal alleges that PAN knew of the Asserted patents through public information related to Centripetal’s previous litigation with Keysight and Cisco. *Id.* at ¶ 56.

³ The ’126 Patent issued on August 25, 2020.

However, not one of the Asserted Patents was at issue in the *Keysight* or *Cisco* cases.⁴ As such, even if PAN had knowledge of the patents litigated in those cases, that does not plausibly show that PAN had knowledge of the Asserted Patents.⁵

In sum, none of Centripetal’s allegations shows it is plausible that PAN had pre-suit knowledge of the Asserted Patents—at most, they show merely that it is “conceivable.” *See Rembrandt*, 950 F. Supp. 2d at 883 (“[Plaintiff] has failed to plead any facts that make it plausible, rather than merely conceivable, that [Defendant] had knowledge of either patent in issue prior to the filing of this suit.”). Moreover, Centripetal has not attempted to plead any factual allegations to show it is plausible that PAN specifically intended its customers to infringe any of the Asserted Patents, as required for inducement, or that PAN knew that its products were “especially made” for use in an infringement of the Asserted Patents, as required for contributory infringement. *CarFax*, 119 F. Supp. 3d at 414; *Jenkins*, 2017 WL 376154, at *4. As such, Centripetal’s claims for pre-suit indirect infringement (both inducement and contributory infringement) and its claims for willfulness should be dismissed.

2. *Centripetal’s Contributory Infringement Claims Also Fail Because Centripetal Has Not Plausibly Alleged That The Accused Products Have No Substantial Non-Infringing Uses.*

A required element of any contributory infringement claim is demonstrating that the

⁴ See Amended Complaint, *Centripetal Networks, Inc. v. Keysight Techs., Inc.*, Case No. 2:17-cv-383-HCM-LRL, ECF 192 (E.D. Va Jun. 13, 2018) (asserting U.S. Patent Nos. 9,264,370; 9,137,205; 9,560,077; 9,413,722; 9,565,213; and 9,917,856); Amended Complaint, *Centripetal Networks, Inc. v. Cisco Systems, Inc.*, Case No. 2:18-cv-94-MSD-LRL, ECF 29 (E.D. Va. March 29, 2018) (asserting U.S. Patent Nos. 9,686,193; 9,560,176; 9,560,077; 9,413,722; 9,203,806; 9,160,713; 9,124,552; 9,565,213; 9,137,205; 9,674,148; and 9,917,856).

⁵ And to the extent Centripetal’s allegations are intended to imply that knowledge of the patents asserted in those prior litigations conveys knowledge of subsequently issued patents in the same family—such as some of the Asserted Patents—courts have held that knowledge of a parent patent does not support a plausible inference that the party had knowledge of other patents in the family. *See, e.g., Virginia Innovation Sciences, Inc. v. Samsung Elecs. Co., Ltd.*, 983 F. Supp. 2d 700, 709–712 (E.D. Va. 2013).

products or components sold by the defendant “have no substantial noninfringing uses.” *i4i Ltd. P’ship*, 598 F.3d at 850–51 (citing 35 U.S.C. § 271(c)). Although Centripetal alleges that “PAN has contributorily infringed and continues to contributorily infringe one or more claims” of the Asserted Patents,⁶ Centripetal fails to allege, much less plead any supporting facts to plausibly show—that the Accused Products lack substantial non-infringing uses.

For example, Centripetal’s indirect infringement claim for the ’028 Patent alleges that “PAN contributorily infringes the ’028 Patent . . . because it has provided software and computer systems with software installed that act as a material component of claims of the ’028 Patent.” Compl. at ¶ 86. Centripetal further alleges that “PAN knows that its products are particularly suited to be used in an infringing manner,” and that the Accused Products “are not staple articles or commodities of commerce because they are specifically made to be used in an infringing manner.” *Id.* At no point, however, does Centripetal allege—much less plead any supporting facts to plausibly show—that the Accused Products have ***no substantial non-infringing uses***, as is required under § 271(c). *See id.* at ¶¶ 81-90.

The allegations in Centripetal’s contributory infringement claims for the other Asserted Patents follow the same format, and thus also fail to allege that the Accused Products have no substantial non-infringing uses.⁷ All of Centripetal’s claims for contributory infringement are insufficiently pled and must be dismissed. *Bill of Lading*, 681 F.3d at 1337 (“To state a claim for contributory infringement, therefore, a plaintiff must, among other things, plead facts that allow an inference that the components sold or offered for sale have no substantial non-infringing uses.”).

⁶ Compl. at ¶¶ 82 (’028 Patent), 111 (’126 Patent), 143 (’903 Patent), 177 (’573 Patent), 206 (’437 Patent), 235 (’266 Patent), 265 (’343 Patent), 296 (’380 Patent), 322 (’899 Patent), 351 (’906 Patent), 381 (’246 Patent), 410 (’413 Patent).

⁷ *See* Compl. at ¶¶ 115, 147, 181, 210, 239, 269, 300, 326, 355, 385, 414.

3. *Centripetal’s Willful Infringement Claims Also Fail Because Centripetal Has Not Plausibly Alleged that PAN’s Conduct was Egregious.*

Centripetal’s willfulness claims fail because Centripetal has failed to plead facts plausibly showing that PAN’s behavior was egregious. *See Bushnell*, 2019 WL 8107921, at *1-2 (“[T]o state a plausible claim of willful infringement, the complaint must also allege facts to demonstrate the defendant’s behavior was egregious under the circumstances.”); *see also Halo*, 136 S. Ct. at 1935 (limiting willfulness infringement to “egregious cases of misconduct beyond typical infringement.”). Centripetal’s allegations in its willfulness claims state only a formulaic recitation of the elements of a willfulness claim—that PAN’s infringement is “willful and egregious” and that “PAN has acted with blatant and egregious disregard for Centripetal’s patent rights with an objectively high likelihood of infringement”—but do not include specific factual allegations of PAN’s egregious acts. *See* Compl. at ¶¶ 59–60.⁸ Instead, Centripetal offers only conclusory allegations that PAN’s infringement was willful and egregious because it was “aware of the Asserted Patents” and “has undertaken no efforts to avoid infringement.” *See id.* at ¶¶ 57, 59.⁹

These types of “[t]hreadbare recitals of the elements of a cause of action, supported by mere conclusory statements, do not suffice.” *Iqbal*, 556 U.S. at 678; *see also Twombly*, 550 U.S. at 557 (“[A] complaint is insufficient if it relies upon ‘naked assertions’ and ‘unadorned conclusory allegations’ devoid of ‘factual enhancement.’”). Indeed, courts in this district and others routinely dismiss willful infringement claims with such threadbare factual support. *See Jenkins*, 2017 WL 376154, at *5 (requiring pleading facts supporting an inference “that the alleged conduct is of the

⁸ Centripetal repeats the same allegations in the direct infringement counts for each of the Asserted Patents. *See* Compl. at ¶¶ 74–77, 103–06, 135–38, 169–72, 198–201, 227–30, 257–60, 288–91, 314–17, 343–46, 373–76, 402–05.

⁹ Centripetal repeats the same allegations in the direct infringement counts for each of the Asserted Patents. *See id.* at ¶¶ 74–77 (‘028 Patent), 103–06 (‘126 Patent), 135–38 (‘903 Patent), 169–172 (‘573 Patent), 198–201 (‘437 Patent), 227–30 (‘266 Patent), 257–60 (‘343 Patent), 288–91 (‘380 Patent), 314–17 (‘899 Patent), 343–47 (‘906 Patent), 373–76 (‘246 Patent), 402–405 (‘413 Patent).

egregious nature described in *Halo*”); *Varian Med. Sys., Inc. v. Elekta AB*, No. 15-871, 2016 WL 3748772, at *8 (D. Del. July 12, 2016) (dismissing willfulness allegation for failing to state facts showing that defendants’ actions “actually amounted to an egregious case of infringement of the patent”); *CG Tech. Dev., LLC v. Zynga, Inc.*, No. 2:16-CV-859-RCJ-VCF, 2017 WL 662489, at *4 (D. Nev. Feb. 17, 2017) (“Under *Halo*, Plaintiffs have failed to state a claim for willful infringement because they have failed to allege any facts suggesting that Defendant’s conduct is ‘egregious . . . beyond typical infringement.’” (quoting *Halo*, 136 S. Ct. at 1935 (alteration in original)). For these reasons, Centripetal’s willful infringement claims for all Asserted Patents should be dismissed.

C. Centripetal Fails To Tie A Complete Asserted Claim To Any Particular Accused Product (Or Combination Thereof).

Centripetal’s direct infringement allegations—like those in *Golden*—make no genuine attempt to link each element of the asserted claims to any Accused Product (or combination thereof). *Golden*, 819 F. App’x at 931 (holding that the plaintiff’s infringement allegations—which consisted of “a dizzying array of disorganized assertions over several hundred pages, disingenuously using the words of the claims to generally describe cryptically identified structures”—were insufficient under the *Iqbal/Twombly* pleading standard). Centripetal’s failure to tie is fatal to all of its direct infringement claims. And because liability for inducement and contributory infringement arises only if there is direct infringement, *see supra* Section III(B), this failing is also fatal to Centripetal’s indirect infringement claims. *Chan Soo Kim*, 2018 WL 1172998, at *3 (“The plaintiffs fail to state a claim for direct infringement, so their claim for induced infringement cannot succeed.”); *Jenkins*, 2017 WL 376154, at *5.

Centripetal’s direct infringement allegations, though lengthy, make no effort to link each element of any Asserted Claim to any Accused Product (or combination thereof). As an example,

the first cause of action recited in Centripetal’s Complaint is “direct infringement of the ’028 Patent.” *See* Compl. at ¶¶ 61-80. Centripetal’s allegations are largely made up of restatements of the elements of the cause of action, legal conclusions, an identification of the products accused of infringement, and a near verbatim recitation of claim 8 of the ’028 Patent (from which asserted claim 10 depends) coupled with the conclusory assertion that the Accused Products include each recited element and therefore infringe. *Id.* at ¶¶ 61-66, 73-80. Although Centripetal identifies a number of independent products—NGFW, Panorama, Cortex, AutoFocus, MineMeld, **and/or** DNS Security Service—as the “’028 Accused Products,” *id.* at ¶ 65 (emphasis added), the Complaint avoids specifying whether Centripetal is alleging that: (a) each of the Accused Products independently infringes, (b) the Accused Products infringe only when they all are working together, or (c) an undisclosed combination of two or more Accused Products infringes. *See e.g.*, *TeleSign Corp. v. Twilio, Inc.*, No. CV 16-2106 PSG (SSX), 2016 WL 4703873, at *3 (C.D. Cal. Aug. 3, 2016) (holding that “complaint fails to sufficiently allege that any of Defendant’s products, or any combination of Defendant’s products, infringe on the [asserted patent].”).

Paragraphs 67-72 are the only paragraphs that include factual allegations relating to the Accused Products. *Id.* at ¶¶ 67-72. But those paragraphs—like the direct infringement allegations found to be insufficient in *Jenkins*—merely provide “a general overview of Defendant’s allegedly infringing products” without specifying which of the purported features of any Accused Product (or combination thereof) satisfies each element of the asserted claims. *Jenkins*, 2017 WL 376154, at *3. In short, Centripetal makes no attempt to tie a complete asserted claim to any particular Accused Product (or combination thereof).

For example, claim 8 of the ’028 Patent recites, *inter alia*, software that causes a packet filtering device to “modify...at least one operator specified by the first packet filtering rule” and,

subsequently, “based on the modified at least one operator specified by the first packet filtering rule, prevent the second packet from continuing.” *See* ’028 Patent at 19:64-20:8. Centripetal’s Complaint includes a jumbled array of allegations regarding “packet filtering rules” that at no point attempts to tie any features in the Accused Products to the “first packet filtering rule,” the “at least one operator specified” by that packet filtering rule, or the “modified at least one operator specified by the first packet filtering rule.” Specifically, the Complaint alleges that:

For example, with the ’028 Accused Products, the NGFW receives packet filtering rules from Panorama, which is a rule provider device. The DSP includes packet filtering rules applied to all traffic traversing the network boundary. Panorama acts as a centralized security management system for global control of the NGFW and provides a single security rule base for threat prevention, URL filtering, application awareness, user identification, and sandboxing. The packet filtering rules are applied to all traffic traversing the network boundary. For example, Panorama, through AutoFocus, provides integrated logs, malware analysis reports, and visibility into malicious events. AutoFocus threat feeds include IP addresses, domains, URLs, and hash indicators that are updated daily. AutoFocus is a threat intelligence analysis database that creates rules which are provisioned to the NGFW using MineMeld. Additionally, Panorama provides threat intelligence and network security management using AutoFocus contextual threat intelligence, Cortex (including XSOAR and XDR).

Compl. at ¶ 68. Nothing in those allegations identifies which feature Centripetal alleges corresponds to the “first packet filtering rule” the “operator” specified by that rule, or how that operator is modified as required by the claim. Without specifying which features of the Accused Products allegedly meet those claim limitations, Centripetal has failed to plead how the Accused Products directly infringe the claims. *See Chan Soo Kim*, 2018 WL 1172998, at *2.

Centripetal’s “additional example” fares no better:

As an additional example, the NGFW receives packet filtering rules from Cortex, which is a rule provider device. The packet filtering rules identify packets corresponding to network threat indicators, which are associated with network-threat intelligence reports from independent providers. Shown below, Cortex XDR analyzes network data with machine learning, to pinpoint targeted attacks, malicious insiders and compromised endpoints. The packet filtering rules identify packets corresponding to network threat indicators, which are associated with network-threat-intelligence reports from independent providers.

Compl. at ¶ 69. As with the first example, there is no indication of what features in the Accused Products allegedly correspond to the “first packet filtering rule” the “operator” specified by that rule, or how that operator is modified as required by the claim. Centripetal has thus failed to show how the Accused Products, alone or in combination, allegedly infringe the ’028 Patent.

All of Centripetal’s claims for direct infringement apply this same pattern of reciting asserted claim language, followed by a jumble of facts describing multiple products, and a failure to specify which features of an accused product (or combination thereof) correspond to the limitations in the allegedly infringed claim. Indeed, for each Asserted Claim there are one or more claim elements for which Centripetal’s Complaint does not identify any feature of the accused product that allegedly satisfies those limitations, nor how they do so.¹⁰ This failure is fatal to Centripetal’s direct and indirect infringement claims. *See Asghari*, 2016 WL 1253533, at *4 (“Plaintiffs must detail how each claim is infringed.”); *Jenkins*, 2017 WL 376154, at *3 (“[B]efore filing a complaint, counsel must ascertain ***exactly what claims should be alleged to be infringed and how they are infringed.***” (emphasis in original). “[A] Complaint such as this that fails to identify with sufficient particularity how each allegedly infringing feature of the accused product infringes the patent is woefully inadequate,” and thus should be dismissed. *Jenkins*, 2017 WL 376154, at *3 (internal quotation omitted).

D. The ’126 and ’028 Packet Filtering Patents Are Patent Ineligible Under § 101.

1. *The ’126 and ’028 Patents and Their Representative Claims.*

The ’126 and ’028 Patents (Compl. Exs. 2 and 1, respectively), which share the same

¹⁰ See Exhibit A for non-limiting examples of how Centripetal’s Complaint fails to plead which features of any Accused Product (or combination thereof) corresponds to certain elements of the Asserted Claims and therefore has failed to plausibly allege infringement.

specifications,¹¹ named inventors, assignees, and effective filing date (as continuations from a common application), are directed to rule-based packet filtering.¹² See '028 Patent, 1:48-49; Compl. ¶¶14, 16 (acknowledging that the '126 and '028 Patents are directed to “filtering network data packet transfers based on one or more rules”). The idea of using **rules** to filter is as old as the concept of filtering itself, and the claims of the '126 and '028 Patents are directed to merely the abstract idea of using rules to filter data within the particular technological environment of a computer network. For example, independent claim 8 of the '028 Patent recites:

8. A packet filtering device comprising:
 - at least one processor; and
 - memory comprising instructions that, when executed by the at least one processor, cause the packet filtering device to:
 - receive a plurality of packet filtering rules** configured to cause the packet filtering device to identify packets corresponding to at least one of a plurality of network-threat indicators, wherein the plurality of network-threat indicators are associated with network-threat-intelligence reports supplied by one or more independent network-threat-intelligence providers;
 - receive a plurality of packets** that comprises a first packet and a second packet; **responsive to a determination that the first packet satisfies a first packet filtering rule**, of the plurality of packet filtering rules, based on one or more network-threat indicators, of the plurality of network-threat indicators, specified by the first packet filtering rule:
 - apply, to the first packet, an operator** specified by the first packet filtering rule and **configured to cause the packet filtering device to allow the first packet to continue toward a destination of the first packet; and**
 - communicate information** that identifies the one or more network-threat indicators and data indicative that the first packet was allowed to continue toward the destination of the first packet;
 - receive an update to at least one packet filtering rule;**
 - modify**, based on the received update to the at least one packet filtering rule, **at least one operator specified by the first packet filtering rule** to reconfigure the packet filtering device **to prevent packets** corresponding to one or more network-threat indicators **from continuing toward their respective destinations**; and
 - responsive to a determination that the second packet satisfies the first packet filtering rule:**

¹¹ The only differences in the specifications are in the “Cross Reference to Related Applications” and “Summary” sections. '028 Patent, 1:4-14, 1:39-2:14; '126 Patent at 1:4-16, 1:41-2:16. Accordingly, most citations in this section are to the '028 Patent.

¹² A packet is a segment of data communicated over a network.

based on the modified at least one operator specified by the first packet filtering rule, **prevent the second packet from continuing** toward a destination of the second packet; and

communicate data indicative that the second packet was prevented from continuing toward the destination of the second packet.

As shown in bold, beyond a generic packet filtering device, the purported invention is claimed entirely in functional terms. And while verbose, claim 8 is very simple. It claims a packet filtering device that:

- (1) receives packets and rules (that correspond to network threat indicators);
- (2) allows a first packet to proceed to its destination if that packet satisfies a first rule, and communicates information about that event;
- (3) receives an update to at least one rule to modify the operator (from allow to block a packet) when that rule is met; and
- (4) prevents (*i.e.*, blocks) a second packet from proceeding if that packet satisfies the modified first rule, and communicates information about that event.

Notably missing from the claim is any recitation of **what rules** to use or **how** to perform the recited functions—let alone how to identify or block network threats. Instead, the claim is directed to the abstract idea of using rules to filter data.

Claim 8 of the '028 Patent is representative of all of the asserted claims of the '028 and '126 Patents because all of those claims are “substantially similar and linked to the same abstract idea” as '126 claim 8 and '028 claim 8—using rules to filter data. *Content Extraction*, 776 F.3d at 1348. Independent claim 8 of the '126 Patent is nearly identical to claim 8 of the '028 Patent, except that the former specifies that rules are received from and information is communicated to a generic “rule provider device” and that the network-threat indicators “comprise unique Internet

host addresses or names.” ’126 Patent, 19:60, 20:1-3.¹³ The other independent claims of the ’028 and ’126 Patents, claims 1 and 15 (in both), are nearly identical to claim 8 (in both), except that instead of claiming a device, they claim a corresponding method (claim 1) and computer-readable media (claim 15). The dependent claims of the ’028 Patent add limitations related to displaying packet delivery data in a user interface (claims 2, 9, and 16); generating a packet log entry (claims 3, 10, and 17); generating a packet log entry and updating a packet flow log (claims 5, 12, and 19); determining and communicating an ordering of network threats based on a packet flow log (claims 6, 13, and 20); and determining a number of packets allowed to or prevented from continuing to their destinations, a time the last network threat was identified, and a number of reports corresponding to a threat (claims 7, 14, and 21). Likewise, the dependent claims of the ’126 Patent add limitations related to displaying packet delivery data in an interface (claims 2, 9, and 16); determining the first and second packets were from a common host and allowing or preventing the packet from continuing to a host (claims 4, 11, 18, and 19); and updating a packet flow log indicative of packet delivery status (claims 6, 13, and 20). Each dependent claim of both the ’028 and ’126 Patents is directed to the same impermissibly abstract idea of using rules to filter data, *IV I*, 838 F.3d at 1357, reciting only result-oriented, functional claim language. *Elec. Power*, 830 F.3d at 1356. No claim recites additional, much less non-generic, computer components. Therefore, this Court may properly analyze claim 8 of the ’028 Patent as representative. *Content Extraction*, 776 F.3d at 1348.

¹³ In response to an obviousness-type double patenting rejection during prosecution of the ’028 Patent, applicant filed a terminal disclaimer over the ’126 Patent, confirming that the two sets of claims are not patentably distinct from each other. *See Simple Air, Inc. v. Google LLC*, 884 F.3d 1160, 1168 (Fed. Cir. 2018) (“[A] terminal disclaimer is a strong clue that a patent examiner and, by concession, the applicant, thought the claims in the continuation lacked a patentable distinction over the parent.”).

2. *Alice Step One: The Claims Are Directed to the Abstract Idea of Using Rules to Filter Data.*

The claims of the '126 and '028 Patents are directed to the abstract idea of using rules to filter data—precisely what the Federal Circuit found impermissibly abstract in *IV I*, 838 F.3d at 1313-14. There, the claims recited “receiving … file content identifiers for data files,” “creating file content IDs,” “determining … whether [the] content identifier matches … other identifiers,” and “outputting … an indication of the data file based on [the determination].” *Id.* Similarly, the claims here are directed merely to “receiv[ing] … packet filtering rules … to identify packets,” “apply[ing] … an operator specified by the first packet filtering rule” to a first and second packet, and “communicat[ing] information” related to whether packet delivery was allowed or blocked—rendering the claims impermissibly abstract. *See id.*; *see also Ericsson Inc. v. TCL Commc'n Tech. Holdings Ltd.*, 955 F.3d 1317, 1327 (Fed. Cir. 2020) (“[W]e have repeatedly found the concept of controlling access to resources via software to be an abstract idea.”); *Elec. Power*, 830 F.3d at 1353 (holding ineligible claims directed to the abstract idea of “collecting information, analyzing it, and displaying certain results of the collection and analysis”); *FairWarning IP, LLC v. Iatric Systems, Inc.*, 839 F.3d 1089, 1094 (Fed. Cir. 2016) (holding ineligible claims “directed to collecting and analyzing information to detect misuse and notifying a user when misuse is detected”); *Intellectual Ventures II LLC v. JP Morgan Chase & Co.*, No. 13-cv-3777, 2015 WL 1941331, *1, 8-12 (S.D.N.Y. Apr. 28, 2015) (holding ineligible claims directed to an “improved method for detecting and preventing entry of a packet containing ‘malware’” using “access rules”). Receiving a packet filtering rule is merely collecting information, which the Federal Circuit has long held abstract. *Elec. Power*, 830 F.3d at 1353-54 (collecting cases). Applying rules is a mental process falling within the abstract idea category. *Id.* at 1354 (collecting cases). And communicating, or “merely presenting the results of,” the abstract processes of receiving and

applying is also abstract. *Id.* (citation omitted).

Further, although lengthy and written in technical jargon, “[c]laims do not become eligible simply because they are written or characterized in a ‘highly technical’ manner.” *Ericsson*, 955 F.3d at 1328 n.1. As in *Ericsson*, where the claims were silent as to **how** or on **what basis** access to resources was controlled, the claims here are silent as to **what rules** to use, **how** those rules are applied, **how** those rules are updated,¹⁴ and **how** packets ultimately are permitted or prevented from proceeding. *Id.* at 1328 (“[T]he claims here do not ‘ha[ve] the specificity required to transform a claim from one claiming only a result to one claiming a way of achieving it’”) (citation omitted; alteration in original); *see also Glasswall*, 754 F. App’x at 998 (holding ineligible claims that “do not purport to claim **how** the invention receives an electronic file, **how** it determines the file type, ... **how** it parses the content according to predetermined rules ... or **how** it determines authorization to receive the nonconforming data”) (emphasis in original).

The claims here are also impermissibly abstract because they merely limit “an age-old practice” to “a particular ... technological environment”—here, a computer network. *IV I*, 838 F.3d at 1330. The Federal Circuit has repeatedly rejected such claims under § 101. *E.g., id.*; *FairWarning*, 839 F.3d at 1094-95 (invalidating claims that “merely implement an old practice in a new environment”). Here, the claimed process—permitting or preventing something from passing a barrier based on an updatable rule—has long been practiced to prevent intrusion into a protected area. The examples are endless: a castle guard allows entry by subjects of a given neighboring fiefdom one day, but blocks them the next based on a proclamation from the king; a prison guard who permits certain types of packages into prison one day, but blocks them the next

¹⁴ In fact, the claims do not recite updating the first packet rule, but rather any rule: “receive . . . an update to at least one packet filtering rule.” ’126 Patent, Col. 20:16-17.

day based on a security alert issued by the warden; an assistant who permits certain types of telephone calls to reach his executive one day, but blocks them the next based on the executive’s directive. Each example involves the use of a rule to filter information or things, where the “operator” specified by the rule (allow or block) is modified. The claims do nothing more than this, and do not disclose any technical details required to achieve the claimed functions in the context of a computer network reading data packets.

As this analogy confirms, the claims can be performed almost entirely in the mind or with pen and paper—further underscoring their abstractness. *See, e.g., CyberSource*, 654 F.3d at 1371 (“[M]ethods which can be performed mentally, or which are equivalent of human mental work, are unpatentable abstract ideas.”). Moreover, “mere automation of manual processes using generic computers does not constitute a patentable improvement in computer technology.” *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017).

In addition, as is readily apparent, the claims are not “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *DDR*, 773 F.3d at 1257. Instead, the claims merely apply in a computer network a previously known abstract idea—using rules to filter data.

While the ’028 and ’126 Patents have not previously been subject to a § 101 challenge, a related patent, U.S. Patent No. 9,413,722 (“’722 Patent”), was subject to § 101 challenges in a prior suit in this District. In that case, Judge Morgan denied without prejudice a § 101-based motion to dismiss with respect to the ’722 Patent because, although “concerned” that the ’722 Patent’s claims were “written very broadly,” he decided that the eligibility determination should be addressed after the *Markman* hearing. *Centripetal Networks, Inc. v. Keysight Techs., Inc.*, Case No. 2:17-cv-383-HCM-LRL, ECF 53 at 8-9 (E.D. Va. Nov. 15, 2017). Here, no *Markman* hearing

is necessary to determine that the claims are directed to an impermissibly abstract idea.¹⁵ Further, while Judge Morgan later expressed “uncertain[ty]” whether the ’722 Patent passed *Alice* step one, *Centripetal Networks, Inc. v. Keysight Techs., Inc.*, No. 2:17-cv-383, 2018 WL 5291875, at *7-8 (E.D. Va. Sept. 26, 2018), no such uncertainty exists with respect to the asserted claims of the ’028 and ’126 Patents, particularly in view of subsequent Federal Circuit decisions holding similar claims impermissibly abstract. *E.g., Ericsson*, 955 F.3d at 1325-31 (holding patent-ineligible claims directed to the abstract idea of controlling access to items); *Univ. of Fla. Res. Found., Inc. v. GE Co.*, 916 F.3d 1363, 1366-69 (Fed. Cir. 2019) (holding patent-ineligible claims directed to automation of data collection, analysis, manipulation, and display).

3. *Alice Step Two: The Claims Recite Non-Inventive Conventional Features and Generic, Result-Oriented Functional Limitations.*

At *Alice* step two, the Court must first remove the abstract idea from the claims, and then “determine whether the **additional** elements” add an inventive concept. *Alice*, 573 U.S. at 217 (emphasis added). These “additional elements” of the ’126 and ’028 Patent claims contain nothing inventive (alone or as an ordered combination) that might transform the claims into patent eligible subject matter. The claims’ recitation of computer components that are generic and conventional—a processor and memory—does not add an inventive concept. *Alice*, 573 U.S. at 223-26 (finding that a “communications controller” is “purely functional and generic” and not inventive); *Ericsson*, 955 F.3d at 1330-31 (“When a claim ‘does no more than require a generic computer to perform generic computer functions,’ as here, the claims lack an inventive concept

¹⁵ Indeed, in a Final Written Decision finding nearly every claim of the related ’722 Patent invalid as obvious over the prior art, the Patent Trial and Appeal Board (“PTAB”) found it necessary to construe only one term in that patent—“network threat indicator”—to reach its findings, and Centripetal did not challenge that construction on appeal to the Federal Circuit, which affirmed the PTAB’s findings and decision. *See Cisco Sys., Inc. v. Centripetal Networks, Inc.*, IPR2018-01760 Paper 45 at 8-10 (Final Written Decision) (PTAB. May 18, 2020), *aff’d sub nom, Centripetal Networks, Inc. v. Cisco Sys.*, No. 2020-2057 (Fed. Cir. Mar. 10, 2021).

sufficient to demonstrate eligibility at step two.”) (citation omitted); *FairWarning*, 839 F.3d at 1096 (“[R]ecitations of basic computer hardware, such . . . a microprocessor” did not make claims directed to abstract ideas patent eligible). Further, the claims recite those components at a high-level of generality, and the specifications establish that both components were conventional. *E.g.*, ’028 Patent, 3:60-63 (“Packet-filtering device 144 may include memory 208, one or more processors 210, one or more communication interfaces 212, and data bus 214.”), 3:67-4:5, 16:64-17:19 (describing functions and steps executed by generic “computers or other devices” and “program modules”). And the claims do not recite an “override” of the normal operation of these conventional components. *Cf. DDR*, 773 F.3d at 1258.

There also is nothing inventive about identifying data that corresponds to network-threat indicators based on network-threat-intelligence reports. The specifications admit that it was conventional practice for organizations to receive reports of network-threat indicators from third-party services and to compare them to traffic logs. ’028 Patent, 1:17-35. Further, the use of generic “rules” with “operators” to filter data is part of the abstract idea itself, and therefore cannot be credited as “inventive” in the step two analysis. But even if such use were credited at step two, it would not change the outcome because use of generic “rules” and “operators” to filter data was not new, and those elements “merely describe the functions of the abstract idea itself, without particularity,” therefore failing to supply any inventive concept. *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1341 (Fed. Cir. 2017) (“Capital One”).

Notably, the claims are silent about **how** network threats are identified, let alone **what rules** to use, **how** the packet filtering device determines whether a packet satisfies a rule, or **how** the operator causes the packet filtering device to permit or bar passage. Instead, the claims of the ’126 and ’028 Patents are written in wholly functional terms, setting forth desired results instead of

concrete, particular solutions for achieving that result. “[E]ssentially result-focused, functional ... claim language has been a frequent feature of claims held ineligible under § 101.” *Elec. Power*, 830 F.3d at 1355-56. As in *Electric Power*, “in this case the claims’ invocation of computers [and] networks ... does not transform the claimed subject matter into patent-eligible applications.” *Id.*

“Other precedent illustrates that pragmatic analysis of § 101 is facilitated by considerations analogous to those of §§ 102 and 103 as applied to the particular case.” *Internet Pats. Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1347 (Fed. Cir. 2015). Here, the Federal Circuit recently affirmed the PTAB’s determination that many claims of the ’722 patent were invalid as obvious in view of a single reference, a ruling that also post-dated Judge Morgan’s earlier decision, in the *Keysight* case. *See Centripetal Networks, Inc. v. Cisco Sys.*, No. 2020-2057, slip op. at 1, 15 (Fed. Cir. Mar. 10, 2021) (affirming the PTAB’s determination that claims 1–7, 10–12, 14–21, 24, and 25 in the ’722 Patent are invalid because they “would have been obvious to a relevant artisan under 35 U.S.C. § 103 in view of a User Guide for the Sourcefire 3D System—a manual the parties have called ‘Sourcefire.’”). As shown in attached Exhibits B and C, representative claim 8 of each of the ’028 and ’126 Patents recite nearly identical limitations as claim 19 of the ’722 Patent, which the Federal Circuit held was obvious in view of a single reference describing a prior art packet filtering device.^{16,17} With their abstract idea removed, there is nothing inventive in these claims.

¹⁶ PAN requests that the Court take judicial notice of the ’722 Patent, attached hereto as Exhibit A, under Federal Rule of Evidence 201. Courts may consider documents attached to a motion to dismiss so long as they are integral to the complaint and relevant. *See Blankenship v. Manchin*, 471 F.3d 523, n.1 (4th Cir. 2006). Items in the public record, like patents and judicial decisions, may be subject to judicial notice. *See Hall v. Virginia*, 385 F.3d 421, 424, n.3 (4th Cir. 2004). The Complaint specifically references prior litigations against Keysight and Cisco in this District, in which Centripetal asserted the ’722 Patent. Compl. ¶¶51, 56. The ’722 Patent attached hereto is identical to the ’722 Patent attached to the complaints in those actions. E.g., *Centripetal Networks, Inc. v. Keysight Techs., Inc.*, No. 2:17cv383, ECF No. 1-4 (E.D. Va. July 20, 2017).

¹⁷ While Cisco did not appeal to the Federal Circuit the PTAB’s determination that Cisco had not shown that five dependent claims (claims 8, 9, 13, 22 and 23) of the ’722 Patent were obvious over

Therefore, the claims of the '126 and '028 Patents are ineligible under § 101.

E. The '246 PACKET Sorting Patent Is Patent Ineligible Under § 101.

1. *Background of the '246 Patent and its Representative Claims.*

The '246 Patent is directed to rule-based data sorting. As shown in independent claim 8, for example, the alleged invention is directed to this longstanding practice (*e.g.*, as in a mailroom), implemented on a generic computer and with respect to data packets in a network:

8. A network security device comprising:
at least one processor; and
a memory storing instructions that when executed by the at least one processor cause the network security device to:
receive, at the network security device, a plurality of rule sets;
receive a plurality of packets via a communication interface of the network security device;
execute, at a first time and on a packet by packet basis, a first rule set specifying a first set of network addresses for which packets should be forwarded;
execute, at a second time and on a packet by packet basis, a second rule set specifying a second set of network addresses for which packets should be forwarded; and
execute, at a third time and on a packet by packet basis, a third rule set specifying a third set of network addresses for which packets should be forwarded, the second time being after the first time, the third time being after the second time, the second set of network addresses including more network addresses than the first set of network addresses, and the third set of network addresses including more network addresses than the second set of network addresses.

As shown in bold, the purported invention is claimed in functional terms and is devoid of any implementation detail. Distilled, claim 8 recites a device that (a) receives packets and rules, and (b) executes, sequentially, three sets of rules, where each rule specifies a larger set of addresses.

Claim 8 is representative of each asserted claim of the '246 Patent, as each claim is directed to rule-based data sorting. Independent claims 1 and 15 are nearly identical to claim 8, except that claim 1 recites a method and claim 15 recites a computer-readable medium. The dependent claims

the single prior art reference at issue in the underlying *inter partes* review proceeding, *see Centripetal*, slip op. at 9 n.2, none of the claims in the '126 or '028 Patents mirrors any of those five dependent claims. *Compare* '722 Patent (Exhibit D) at 19:59-20:9, 20:49-54, 21:55-22:34, *with* Compl. - Ex. 1 at 17:45-23:22 and Ex. 2 at 17:48-23:35.

provide merely minor alterations for various rules (e.g., identifying spoofed/protected addresses to drop/copy packets, as in claims 2, 6, 7, 9, 13, 14, 16, and 20, without specifying *what rules* to use or *how* to accomplish those functions); additional generic components (e.g., network interfaces in claims 3, 10, and 17); and additional functional, result-based limitations without any recitation of *how* to accomplish those functions (e.g., performing packet alteration/transformation functions in claims 4, 5, 11, 12, 18, and 19). None of these additional limitations alters the § 101 analysis.

2. *Alice Step One: The Claims Are Directed to the Abstract Idea of Sorting Data According to Rules.*

The Federal Circuit has established that claims directed to the abstract idea of sorting computer data according to rules are not patent eligible. *IV I*, 838 F.3d at 1316-1318 (holding claims to “receiving, screening, and distributing e-mail” impermissibly abstract and analogous to a corporate mailroom). The claims of the ’246 Patent and those in *IV I* recite nearly identical steps. There, the claims recited a post office for email comprising “a database of business rules,” “a rule engine … to selectively apply the business rules,” and a “distribution mechanism … to control delivery of the e-mail message” *Id.* at 1316-17. Similarly, here the ’246 claims recite a network security device configured to “receive … a plurality of rule sets … [and] packets,” and “execute” a first, second, and third rule sequentially, which rules specify sets of addresses. The ’246 claims are ineligible for the same reasons as the claims in *IV I*. Likewise, the Federal Circuit has held other analogous claims to be directed to unpatentable subject matter. *See Elec. Power*, 830 F.3d at 1353 (“collecting information, analyzing it, and displaying certain results of the collection and analysis” is unpatentable); *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017) (“*Capital One*”) (“the abstract idea of collecting, displaying, and manipulating data” is unpatentable).

The claims are also impermissibly abstract because they merely implement long-prevalent

practices—*e.g.*, sorting mail—using generic computers. Like the claims in *IV I* to “screening messages,” which the Federal Circuit analogized to corporate mailrooms, 838 F.3d at 1317-18, the ’246 claims sequentially sort incoming data packets according to rules to forward the packets to appropriate addresses. Implementing an old practice on generic computers cannot save the claims from abstraction. *See Credit Acceptance Corp.*, 859 F.3d at 1055. Further, the claims can be performed largely, if not entirely, mentally—executing a rule that specifies a set of addresses to where a packet should go requires nothing more than use of one’s mental faculties. Finally, the claims are not rooted in computer technology to overcome a problem specifically arising in computer networks. *DDR*, 773 F.3d at 1257.

3. *Alice Step Two: The Claims Recite Conventional Features and Generic, Result-Oriented Functional Limitations That Are Not Inventive.*

With the abstract idea removed from the ’246 Patent claims, their additional elements contain no inventive features to transform the claims into patent eligible subject matter. The claimed packet security gateway is described as “any computing device configured to receive packets and perform a packet transformation function on the packets.” ’246 Patent, 4:50-52. As with the ’126 and ’028 claims, recitation of generic, conventional computer components—a “processor” and “memory,” and in some dependent claims, an “interface” to receive packets—does not add an inventive concept. *Alice*, 573 U.S. at 223-24; *FairWarning*, 839 F.3d at 1096; *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1324-25 (Fed. Cir. 2016) (“[G]eneric computer components such as an ‘interface,’ ‘network,’ and ‘database’ . . . do not satisfy the inventive concept requirement.”). Further, none of the claims purports to “override” the normal operation of the claimed components. *Cf. DDR*, 773 F.3d at 1258.

Similarly, the rules recited in the ’246 Patent’s claims do not supply an inventive concept because they are (a) part of the abstract idea itself, and (b) set forth in wholly functional terms—

describing merely the desired result, instead of concrete, particular solutions for achieving that result. “[E]ssentially result-focused, functional … claim language has been a frequent feature of claims held ineligible under § 101.” *Elec. Power*, 830 F.3d at 1356. The claims fail to describe **what rules** to use, **how** any of the claimed rules are formed or executed, or **how** any of the other functions recited by the claims are achieved. *See id.* at 1355 (“Inquiry therefore must turn to any requirements for **how** the desired result is achieved.”) (emphasis in original). The limitations of the claims here do not instruct how technologically to perform the claimed steps, only that they should be done. *See Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1345 (Fed. Cir. 2018) (finding claims ineligible where the “limitations are for either collecting a second data set or controlling the order and timing of when to display the collected second data set, not for **how** to engineer or program the display of the second data set”) (emphasis in original).

Therefore, the claims of the ’246 Patent are ineligible under § 101.

III. **CONCLUSION**

Centripetal has not plausibly alleged indirect infringement (induced or contributory) or willful infringement. Centripetal also makes no attempt to tie a complete asserted claim to any particular accused product (or combination thereof), which is fatal to both its direct and indirect infringement claims. Further, the Ineligible Claims are directed to abstract ideas using generic computer components. As confirmed by the Supreme Court and the Federal Circuit, such a bare combination is insufficient to confer patent eligibility. Thus, the patent-ineligibility of the ’126, ’028, ’246 Patent claims is well-suited for disposition on a motion to dismiss. For the reasons set forth above, PAN respectfully requests that this Court grant its Motion to Dismiss For Failure To State A Claim.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on April 30, 2021, I electronically filed the foregoing with the Clerk of Court using the CM/ECF system, which will send a notification of such filing to the following counsel of record:

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